The Noble Art: Alchemy and Patronage in Early Modern Europe

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INTRODUCTION

On December 6, 1644, the dean of the Faculty of Medicine in Paris, Gui Patin (1601-72), wrote a letter to another physician complaining about a rival doctor, François Vautier (1589-1652). "M. Vautier slanders our Faculty," Patin writes, for "he says that we only have bleeding and Senna, and boasts of having the great secrets of chemistry."¹ These secrets included the medical use of antimony, which, though commonly used by alchemical physitians, was renounced by physicians like Patin as a substance harmful to patients. Patin further degrades Vautier, calling him reckless and dangerous. Patin ultimately concludes that:

He hurts himself with three things that never make a man more wise, with knowledge of chemistry, with astrology, and with the philosopher's stone. But one does not heal sickness with all of these beautiful secrets. Hippocrates and Galen are the beautiful secrets of our profession, which he has perhaps never read.²

In 1646, Jean Israel uses the platform of his translation of a work of Basil Valentine, famed fifteenth-century alchemist monk, to defend Vautier and chemical philosophy. In the Epistle, dedicating the work to Vautier, Israel discusses his opposition to those, who like Patin "maintain that the preparation of a universal medicine that the

¹ Gui Patin and J.H. Reveille-Parise, *Lettres de Gui Patin* (Paris, 1846), 346, http://babel.hathitrust.org/cgi/pt?id=nyp.33433071373249;view=1up;seq=13. "M. Vautier médit de notre Faculté assez souvent, et nous le savons bien; il dit que nous n'avons que la saignée et le séné, et se vante d'avoir de grands secrets de chimie." ² Ibid, 347. "Il se pique de trois choses qui ne firent jamais un homme plus sage, de

² Ibid, 347. "Il se pique de trois choses qui ne firent jamais un homme plus sage, de savoir de la chimie, de l'astrologie et de la pierre philosophale; mais on ne guérit point de maladies par tous ces beaux secret. L'Hippocrate et le Galien sont les beaux secrets de notre méteir, qu'il n'a peut-être jamais lus."

philosophers have called their Philosopher's stone has never been found and can still only be met in imagination." Israel instead portrays himself as a kind of co-conspirator with Vautier against "the ignorants or presumptuous incredulants and persecutors, who throw up thousands of insults against this truth of chemistry." From the perspective of Israel and that of other chemical philosophers, alchemists are the enlightened—discoverers of nature's secrets and defenders of truth. They stand for progress, and for the people.

The conflicting philosophy of Patin and Vautier is indicative of a larger conflict in early modern European medicine between the traditional physic of Hippocrates and Galen, and the emerging alchemical philosophy. As Early Modern alchemist Nicaise Le Fèvre (c. 1610-69) observes, "the body of the Physitians was divided...the branches were separated from the Roots." This conflict was, however, more complicated than a simple difference of philosophy. In the world of medicine, the recognition of a physician meant not only validation, but power and wealth as well. The more medicines patrons and government deemed legitimate, the broader the medical field and the more competition for patients. This recognition became even more significant and influential when it came

³ Basil Valentine, *Revelation Des Mysteres Des Teintures Essentielles des Sept Metaux*, & *de leurs Vertus Medicinales*., trans. Jean Israel (Paris, 1668), Aii_v, Image 6, Bayerische StaatsBibliothek digital, http://reader.digitale-sammlungen.de/de/fs1/object/display/bsb10220449_00006.html. "qui se peuuent tirer de

sammlungen.de/de/fs1/object/display/bsb10220449_00006.html. "qui se peuuent tirer de la Medecine HERMETIQVE, & particulierement osent soûtenir que la Preparation d'vne MEDECINE vniuertele, que les Philosophes ont appellé leur Pierre Physique, n'aye jamais pû estre trouuée, & ne pouuoir encore ester rencontrée que dans la fantaisie."

⁴ Ibid, Aiii_v, Image 8, http://reader.digitale-sammlungen.de/de/fs1/object/display/bsb10220449_00008.html. "des ignorants ou presompteux incredules & persecuteurs, qui vomissent mille inuectiues contre cete VERITE de CHEMIE."

⁵ Nicaise Le Fèvre, *A Compendious Body of Chymistry* (London, 1662), A4v, Image 9, Early English Books Online, http://goo.gl/ezcaiT. Wing L924B.

from sources of authority, the kings and noble class, who both supported and practiced alchemy.

Why is it that the early modern aristocracy chose to support the alchemists over the more traditional and better-established doctors of the Hippocratic and Gallenic tradition? The noble recognition of alchemy diversified the medical field and created foundation for scientific progress, but it also created tension amongst the various medical philosophies. These conflicts played out in royal courts and lecture halls, and were given voice in the front matter of seventeenth-century scientific texts. Dedicatory epistles and prefaces provide insight into the minds of the individuals behind the theories—the authors, translators, and publishers—and reveal the wider context of the materials, showing why these works mattered. In this study, I draw on a variety of such material, including Edward Bolnest's dedication to the Duke of Buckingham in *Medicina* instaurata and the subsequent included letter from Marchamont Nedham to Bolnest, Sir Kenelm Digby's dedication to his son in *Of Bodies and of Man's Soul*, and Nicaise Le Febvre's⁶ dedications to Charles II and apothecaries. Letters such as these cast alchemy in a defensive role, fighting to obtain legitimacy against the condemning words of learned physicians. These dedications may also help to answer the question of why practitioners of what educated, traditional physicians called "poyson" received patronage in the royal courts of early modern Europe. 7 Chemical physicians won the patronage of kings because of the possibility that their philosophies presented, including the legitimization of royal

⁶ Also Le Fèvre.

⁷ Bruce T. Moran, *Patronage and Institutions: Science, Technology, and Medicine at the European Court, 1500-1750.* (Rochester: Boydell Press, 1991), 170.

authority through strengthened claims of divine right and improved reputation through association with developing Enlightenment ideals.

ALCHEMY AND HUMORAL THEORY

The definition of alchemy is complicated and has been the subject of debate for modern scholars, but also for early modern scientists. By its most simple definition, "Alchemy is the separation of the impure from the purer substance," whether that be obtaining the purer metals from a substance or extracting disease from the body. William Newman and Lawrence Principe explore the definition of alchemy more thoroughly in their article "Alchemy vs. Chemistry: The Etymological Origins of a Historiographic Mistake." One of the more controversial tasks of scholarship is differentiating between alchemy and chemistry in the early modern era. In this paper, I follow Newman and Principe, who take the position that one cannot separate alchemy from early modern chemistry. When seventeenth-century physicians discussed "chemistry" or "chymistry," they were also referring to alchemy.

Alchemy, chemistry, and chymistry are cognates, and I use these terms interchangeably in this paper; chemical physicians, unless otherwise stated, are alchemists. Additional terminology depends on the particular application alchemy.

⁸ Martin Ruland the Elder, *A Lexicon of Alchemy*, trans. A.E. Waite (London: John M. Watkins, 1964), 20.

⁹ William R. Newman and Lawrence M. Principe, "Alchemy vs. Chemistry: The Etymological Origins of a Historiographic Mistake," *Early Science and Medicine* 3, no. 1 (1998): 32–65, http://www.jstor.org.proxy.lib.ohio-state.edu/stable/4130048.

Iatrochemistry, for example, refers to the medicinal side of alchemy. ¹⁰ This approach manifested in the use of chemicals, commonly antimony and mercury, to treat disease. This concept also refers to the search for a universal medicine. Unlike what popular culture purports today, alchemists in Europe certainly believed the universal medicine extended life, but not indefinitely. ¹¹ The other application of alchemy, the transmutation of metals, is known as chrysopoeia, of which the ultimate goal was to transmute metal through a series of chemical processes into its purest form: gold. ¹²

The philosopher's stone, today an iconic myth of alchemy, was also a myth to many learned early modern physicians, especially those who denounced chemistry in favor of the more traditional humoral theory. It was, however, a real possibility to most alchemists. The stone was discussed as having a variety of purposes. Some associated the stone with the universal medicine, or elixir, a cure that was supposed to heal any affliction. Israel calls this universal medicine the philosopher stone in his dedication to Vautier. In *A Lexicon of Alchemy*, alchemical physician Martin Ruland the Elder (1532-1602) conflates the stone's healing potential with transmutation. He writes that the philosopher's stone "makes perfect metals, and cures the diseases that afflict the three kingdoms of Nature." Since early modern alchemists refer to the stone in different capacities, I will refrain from using the term out of context and instead specifically discuss either the universal medicine or the alchemists' transmutation objectives.

¹⁰ Ibid., 52.

¹¹ Lawrence M. Principe, *Synthesis: Secrets of Alchemy* (Chicago: University of Chicago Press, 2012), 5, http://site.ebrary.com/id/10631919.

¹² Newman and Principe. "Alchemy vs. Chemistry." 64.

¹³ Ruland the Elder, A Lexicon of Alchemy, 395.

The earliest record of alchemy was found in Egypt and is dated from the third century A.D. It came to Europe in the medieval era with Arabic science (hence the term alchemy), and attained its greatest prominence during the early modern period.¹⁴ Alchemy, however, did not emerge unopposed. In the medical field, iatrochemistry had to defend itself against the more established, and less controversial, humoral theory. This philosophy was the predominant medical philosophy for the early modern European medical field, and is thought to have originated with Hippocrates (c. 460 BCE – 370 BCE) and further developed with Galen (c. 129 AD - 216 AD). The essential principals of were that the body was comprised of four humors—blood, phlegm, yellow bile, and black bile—and that these four humors were associated with the elements—water, air, fire, and earth. Illness was associated with an imbalance of humors, and treatments were applied to restore balance. 15 "When thou findest thy selfe to be infected and feelest the bloud flickering," one early modern physician advises, "bleed," and bleed physicians did, leeching and lancing well into the nineteenth century. 16 In Europe, the humoral theory of Hippocrates and Galen dominated the medical world for centuries. Even in the early modern period, alchemy's heyday, Hippocratic and Galenic medicine maintained a strong following.

By the seventeenth century, however, these physicians had opposing theories with which to contend, including alchemical treatments, a tension apparent in the rivalry between Patin and Vautier. Other examples illustrating this tension include an epistle

¹⁴ Principe, Secrets of Alchemy, 4.

¹⁵ Galen and P.N. Singer, *Selected Works* (Oxford: Oxford University Press, 1997), x, EBSCOhost, http://goo.gl/5ZAYLH.

¹⁶ Anon., *The Plagues Approved Physitian* (London, 1665), A8r, Image 7, Early English Books Online, http://goo.gl/0mWNPg. Wing P2337.

dedicating a commentary of a letter about blood transfusion to Charles II (1630-80) in which George Acton simultaneously expounds the wonders of alchemy and disparages Galenic physicians. He writes, "It is a most undoubted truth, That [alchemists] *Paracelsus, Van Helmont*, and many others, have been able to conquer all Diseases Gallenical Physitians now call incurable." Had the accusations of learned physicians not posed a threat to chemical medicine, Acton and others writing in defense of iatrochemistry would not have felt the need to attack them.

Most commonly, alchemists were accused of fraud and, worse, poisoning patients. Smith relates an example of fraud occurring in the Hapsburg court of Leopold I (1640-1705). A supposed alchemist arrived claiming to have a technique for true transmutation, but once he left it was ineffective. According to Smith, the alchemist, physician, and courtier Johann Joachim Becher (1635-82) "described him as a fraud and a meddler (and someone who might ruin Becher's own reputation)." Tara Nummedal gives another example of alchemical fraud in the Holy Roman Empire. Philipp Sömmering (ca. 1540-75) entered in a contract of patronage with Duke Julius of Braunschweig-Wolfenbüttel (1564-1613) to gain a position at court, but ultimately failed to fulfill his promise of transmutation for the Duke. When Sömmering fell out of favor, he and another alchemist at court, Anna Maria Zieglerin (1550-75), were charged for committing a variety of

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¹⁷ George Acton, *Physical Reflections upon a Letter* (London, 1668), A3r, Image 3, Early English Books Online, http://goo.gl/AaWi1d. Wing A450.

¹⁸ Pamela H. Smith, *The Business of Alchemy: Science and Culture in the Holy Roman Empire* (Princeton: Princeton University Press, 1994), 184.

crime, including fraud and attempted poisoning. They were tortured and violently executed.¹⁹

J.H. Oxon, a translator and publisher of alchemical texts, warns that "Wee have in these dayes many pretenders to great Mysteries, but by their Fruits you may know them; were there but any sparke of modesty left in the hearts of such impudent ignorant persons, they would not thus blemish so noble a Science." These imposters "beguile the Unwary, and [abuse] the necessities of their afflicted Patients." ²⁰

Though alchemists strove to denounce such pretenders, fraud still affected how alchemy was viewed by the public and critics in the medical world attempted to use this perception against its practitioners. Principe and Newman quote a saying from Andreas Libavius: "Paracelsian alchymia is an art without art whose end is to go a-begging."²¹ Cases of poisoning throughout the seventeenth century did not help the alchemists' cause either.

Alongside this history of fraud and poison associated with alchemy, however, there is also a history of patronage. Royals and nobles had long acted as patrons to artists, philosophers, explorers, and scientists. In the realm of medicine, physicians could be supported by means of economic sponsorship, patient referrals, or employment as personal physicians. One might think that the aristocracy would favor the doctors of the long-established Hippocratic and Galenic traditions, but they seem often to have patronized alchemists. In France, the courts of Louis XIII (1601-43) and XIV (1638-

²¹ Newman and Principe, "Alchemy vs. Chemistry," 55.

¹⁹ Tara E. Nummedal, *Alchemy and Authority in the Holy Roman Empire* (Chicago: University of Chicago Press, 2007), 1–4.

²⁰ Basil Valentine, *The Triumphant Chariot of Alchemy*, trans. J.H. Oxon (London, 1660), πv , Image 4, Early English Books Online, http://goo.gl/j86t4O. Wing B1021.

1715) often favored chemical physicians. Louis XIII created a garden in which physicians could practice and teach new medicine, including iatrochemistry. Louis XIII's brother, Gaston, Duke of Orléans (1608-60), opposed the University of Paris' faculty, which Patin would later head, on their monopoly to practice in Paris.²² Vautier was first the primary physician of Gaston and Louis' mother, Marie de Medici (1575-1642), and then, much to Patin's displeasure, rose to *premier médecin* of Louis XIV in 1646. Vautier's successor, Antoine Vallot (1594/5-1671), was also a doctor of "the true *Pharmacy*; which is *Chymistry*."²³

In England, alchemists like John Dee (1527-1608) and Edward Kelly (1555-1597) were patronized in the court of Elizabeth I (1533-1603). Le Fèvre, starting in France in the King's Jardin as a chemistry professor appointed by Vallot, taught Charles II and was subsequently made a royal chemistry professor and royal apothecary in England.²⁴ Le Fèvre dedicated his *A Compleat Body of Chymistry* to Charles II and revealed the King as a patron of his. "I reflect upon the gracious favor your Majesty hath done me," he writes, "by calling me to be one of your Majestie's servants." He also hints at Charles II's own experience with alchemy, thanking the king "for instructing those which dedicate themselves to the practice of the Noblest and best kind of *Pharmacy*." He is an example

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²² Claude K. Abraham, "The French Royal Family: Patrons of Science in the Age of Louis XIII," *The French Review* 37, no. 2 (December 1963), http://www.jstor.org.proxy.lib.ohio-state.edu/stable/384916. On the garden, 206-7. On the royal fight against the University of Paris' monopoly, 210.

²³ Le Fèvre, *A Compendious Body of Chymistry*, ar-v, Images 9-10, Early English Books Online, http://goo.gl/9GZ0jk.

²⁴ Richard S. Westfall, "Le Febvre, Nicaise," *The Galileo Project*, n.d., http://galileo.rice.edu/Catalog/NewFiles/lefebvre.html.

²⁵ Le Fèvre, *A Compendious Body of Chymistry*, A2r, Image 6, Early English Books Online, http://goo.gl/cStjqR.

²⁶ Ibid, A2v, Image 7, Early English Books Online, http://goo.gl/AykhbL.

of one of the "prince-practitioners," who themselves became involved in the pursuit of scientific study.²⁷ George Villiers, Second Duke of Buckingham (1628-87), was also a patron of alchemy and a common dedicatee of chymical texts. George Hartman, a steward of alchemist Sir Kenelm Digby (1603-65), collected and published some of Digby's works, including a second edition of Digby's receipts in 1675 that Hartman dedicated to Buckingham, "as the most competent Judge and Patron of Learning and Vertue."²⁸

By the mid seventeenth century, there was an established tradition of alchemists in the court that appears to have been able to withstand any associations with deceit and accusations of poison. It seems that the promises of health and wealth were too tempting, and the political and cultural mechanisms surrounding the practice of alchemy too strong for controversy to quash.

PATRONAGE

For alchemy, patronage took on many forms. Kings had a history of bringing alchemists to court, and nobles supported alchemists on their estates. Nummedal describes Duke Friedrich I's laboratory, which he created on his estate in the ducal gardens in 1596. He outfitted the laboratory and staffed it with alchemists and their assistants, who pursued their art through work on projects for him.²⁹ To create a

²⁷ Moran, *Patronage and Institutions*, 170.

²⁸ Sir Kenelm Digby, *Choice and Experimented Receipts in Physick and Chirurgery* (London, 1675), A2v, Image 3, Early English Books Online, http://goo.gl/OWx1Xi. Wing D1425.

²⁹ Nummedal, *Alchemy and Authority*, 122–33.

laboratory was an expensive endeavor in and of itself, but the ingredients for alchemical experiments could also be costly. Nummedal lists ingredients of Zieglerin's philosopher stone recipes, which included "six pounds of lead, two large rubies, one small bird, eight pounds of quicksilver, vinegar, salt, horse manure, and unspecified quantities of Hungarian gold, antimony, and the quintessence." Patrons could also provide general support, outside of financing experimentation. Lord Ashley, Earl of Shaftesbury, a patron of John Locke's, provided Locke a lease and annuity. For chemical physicians, patrons could provide employment, as Vautier was the premier médecin to Louis XIV.

Patrons did more than fund alchemists though. They could expand their business, utilizing their connections to refer clientele. Alchemists could invoke the name of their patron to network, improving their own prospects, help other practitioners, or support the legitimacy of the field of alchemy as a whole.

Patronage was also important to alchemy in that it created a space for the chemical art in academia. Members of nobility, and sometimes the bourgeois or clergy, hosted salons, where scientists and intellectuals could gather to develop ideas. Royal patrons established academic societies, for research, discussion, and publication.

Similarly, royal patrons could offer their protection that allowed for the preservation of organization and sciences, like in 1642 when Louis XIV took control of the Jardin Royal, creating a buffer between the Jardin, associated with chymistry, and the protesting physicians of the Paris Faculty.³²

³⁰ Ibid., 115.

³¹ E.S. De Beer, *The Correspondence of John Locke*, vol. 1 (Oxford: Oxford University Press, 1976), 420–1.

³² Moran, *Patronage and Institutions*, 7–8.

Just as varied as the types of patronage for alchemists were the motivations for patronage. The kings and nobles who financed and supported alchemy had political and philosophical reasons to do so. In the context of the seventeenth century, when the institution of the monarchy was called into question and religious tensions were high, alchemy offered the potential for reinforcement of legitimate rule and the establishment of lasting legacy. In a court that favored alchemy, nobles could use alchemy to leverage their own authority. From a philosophical perspective, alchemists began to align themselves with the principles that would usher in the Enlightenment, like empiricism and accessibility. Patrons wishing to create a progressive and intellectual persona would want to support such study. An increasing emphasis on science and experimentation for the benefit of public good would also encourage the investment of patrons, who either had an authentic desire for common benefit or needed to maintain their image as enlightened leaders.

Authority through Alchemical Divine Right

Alchemy would have been an appealing patronage project for monarchs and nobles because its tenets reinforced the authority of political leaders. For monarchs, alchemy was a line of defense in preserving their way of life. In the early modern era, as ideas about governance changed, the balance of power shifted away from monarchs. These rulers, lest they be usurped by the tide of political change, faced the daunting challenge of not only defending the superiority of their country from international threats but also their very right to rule. Their own subjects questioned, undermined, *revolted* against their authority and the very idea of monarchy. Consequently, Royals would have been especially motivated to search for new means of validating their right to rule.

Alchemical patronage presented the potential for such justification through its capability of providing proof of divine right.

For centuries, the monarchy had claimed power on the basis of divine right. The mythology of Clovis (466-511), first king of the Franks, set this precedent. In the late fifth century, Clovis knelt before the bishop of Reims in a church of white. According to Gregory of Tours' chronicle, there, amongst his people, the sweet smell of incense hanging in the air, Clovis forsook his 'heathen gods' "of stone or wood" and was baptized as a Christian. A dove flew down from the heavens as a messenger of God, delivering sacred oil. With this oil, Remi anointed Clovis, intertwining the power of the king with the power of God. As a divine ruler, "the absolute monarch was accountable to god alone; ordained by god to rule, and only god could judge him."

In the seventeenth century the monarch's hold on power had become tenuous. To rule with absolute power it was not enough to declare or demand one's authority. People had begun to question what it meant to rule and who had the right. In England, political unrest of the English Civil War culminated in regicide and complete upheaval of the government. Charles II, a king without a throne, lived in exile while England was under Oliver Cromwell's commonwealth. During the Restoration, when he returned to England to claim his crown, his challenge was not only instating his personal rule over England, "but reconstituting the legitimacy of the monarchy itself." 36

³³ Gregory, *History of the Franks*, trans. Ernest Brehaut (New York: Norton, 1969), 38; 40–1.

³⁴ William W. Clark, *Medieval Cathedrals* (Westport: Greenwood Press, 2006), 87.

³⁵ Elizabeth Bond, "Old Regime in France" (Class Lecture, Ohio State University, January 19, 2016).

³⁶ Kevin Sharpe, *Rebranding Rule: The Restoration and Revolution Monarchy 1660-1714* (London: Yale University Press, 2013), 3.

Meanwhile in France, civil wars known as the Fronde threatened the regime of Louis XIV. The *Parlements de Paris* rebelled against the French monarchy to defend their rights. The nobility also revolted, angrier still at the power they lost under Cardinal Richelieu (1585-1642) and resistant to the recent increase in taxes with Cardinal Mazarin's (1602-61) policies. When Louis came into power in his own right, he had to reestablish the absolute power of the monarchy over the factions of his kingdom.

Patronage was an effective tool in establishing power as "a vehicle whereby patrons augmented their personal prestige and influence." Aristocrats used patronage as a way of creating a hierarchical network to support themselves.³⁷ As historian Bruce T. Moran argues, beginning at the end of the sixteenth century, courtiers adapted the patronage system as a means of exhibiting their power through their "elaborate collections of art and natural wonders." The Lord proved his power to Cyrus, king of Persia, promising, "I will give thee the treasures of darkness, and hidden riches of secret places, that thou mayest know that I, the lord, which call *thee* by thy name, *am* the God of Israel" (Isiah 45:3).³⁹ Just as the Lord displayed his supremacy, monarchs strove to create an illusion of divinity for the people through spectacular exhibitions of wealth, knowledge, and achievements that defied nature, impressing upon their subjects the might of their power in order to retain their absolute authority. The "hidden riches" of alchemy could have been one such natural wonder, and one that would be particularly appealing to royalty.

³⁷ D. J. Sturdy, *Science and Social Status: The Members of the Académie Des Sciences 1666-1750* (Rochester: Boydell Press, 1995), 39–40.

³⁸ Moran, Patronage and Institutions, 171.

³⁹ All scripture quotations are taken from the online King James Bible, http://www.kingjamesbibleonline.org, 2016.

Transmutation as a Sign of God's favor

There were many reasons a king would have desired the ability to transmute metals into gold, including the obvious, practical financial motivations. Wars in Europe had left the treasury of monarchs wanting. Additional taxation contributed to the internal instability of civil wars in England and France. Both Charles I and Cardinal Mazarin attempted to increase taxes to make up for the funds expended toward the Thirty Year's War. During the Restoration, Charles II had to establish the throne again and obtain the proper symbols of wealth and regality. Wealth would have also meant power to the monarchs. To establish independence from their respective Parliaments, a separate source of income would be appealing to the monarchs of France and England. With their own source of income, Charles II and Louis XIV would no longer have to appeal to their respective parliaments when they wanted to conduct war, organize explorations, or make investments. They would no longer have to risk the ire of their subjects through increased taxation. There would be no economical check on their power.

It was more than the practicality of refilling the royal coffers that drove monarchs to patronize the alchemists, however. ⁴⁰ There were certainly other more proven investments that could have increased their wealth. But to transmute metal, to alter its very makeup, to possess means of creation—ability thus far ascribed only to God—"could be interpreted as confirming princely power and fitness to rule."⁴¹ But as D. J.

⁴⁰ I intend to focus more on the perceptual reasons that would motivate alchemical patronage. Other authors have already clearly elucidated the monetary and commercial justifications for alchemical patronage. See Tara Nummedal's *Alchemy and Authority in the Holy Roman Empire*, particularly Chapter Three, for the technological and practical applications of alchemy in mining.

⁴¹ Smith, *The Business of Alchemy*, 182. On the link between alchemy and creation, also see Smith.

Sturdy indicates, accomplishing such a feat would do even more than reinforce the reputation of an individual ruler, it would augment the status of monarchical governance as a whole.⁴² Who would doubt the validity, the absolute, divine ordination, of monarchy once God had recognized such governance by bestowing kings his almighty power?

In the early modern era, signs of God's will were still important to the establishment of legitimacy. Coronations included ceremonies obtaining recognition from religious authorities, and Kings took religious counsel. Religion was an important matter to the people as well. Alchemical discoveries could have been a sign of the religious favor kings desired, and of which their subjects would take heed. In *The Business of Alchemy*, Pamela Smith focuses on the effects of alchemy in the Hapsburg court and how a successful transmutation was a sign of God's favor and the strength of the emperor's faith.⁴³ This logic can be extended to other courts and general religious approval. If a king discovers the power of God, his people would consider that religious approval.

This approval would have been especially important to Charles II, who was confronted with religious tension throughout his rule. England had a long history of conflict between Catholic and Protestant Christianity. The marriage of Charles I to the Catholic Henrietta Maria of France precipitated the Civil Wars. He had promised Parliament that Catholics in England would receive no special benefits, yet secretly added such a commitment to his marriage contract. 44 Charles II eventually inherited a religiously divided, paranoid nation, as well as the mistrust associated with his

⁴² Sturdy, Science and Social Status, 42.

⁴³ Smith, *The Business of Alchemy*, 182.

⁴⁴ "Charles I (r. 1625-1649)," *The Official Website of the British Monarchy*, n.d., http://www.royal.gov.uk/historyofthemonarchy/kingsandqueensoftheunitedkingdom/thest uarts/charlesi.aspx.

treacherous father and French, strong-willed, Catholic mother. Correspondence with his cousin, Louis XIV, revealed Charles also received external pressures to favor Catholicism. In 1663, shortly after Charles reclaims his throne, Louis writes, "I am persuaded that you want to well consider and have some regard to the recommendation that I make you in the interest of the Catholics of your kingdom who have, many times, signaled their zeal and their fidelity for the service of the royal power and for yourself."⁴⁵ Charles did possess personal Catholic leanings and though he resisted conversion until his death there was always the question of where his religious convictions laid.⁴⁶

Universal Medicine, Legacy, and Authority

Gold was not the only goal for the patrons of alchemy; chymical experiments also promoted the search for a universal medicine. To a monarch, obtaining a universal medicine would mean more than the obvious medical benefits. Starting in the thirteenth century and extending to the eighteenth, nearly the nineteenth in France, it was commonly believed that the king possessed a special power: the King's Touch. The touch of a monarch supposedly cured scrofula, known as The King's Evil, a form of tuberculosis.⁴⁷ If a King possessed an alchemical, universal medicine with authentic healing powers, he would be able to prove the power so long ascribed to him through legend. In Chapter 5 of Luke, Jesus encounters a man with leprosy and heals him with merely a touch. The belief in the King's Touch evokes religious connotations in the

signalé leur fidélité pour le service du feu roi et pour le vôtre."

que je vous fais de l'intérêt des catholiques de votre royaume qui ont, en tout temps,

Louis and Pierre Gaxotte, *Lettres de Louis XIV* (Paris: J. Tallandier, 1930), 19. "je suis persuadé que vous voudrez bien considérer et avoir quelque égard à la recommendation

⁴⁶ David C. Hanrahan, *Charles II and the Duke of Buckingham: The Merry Monarch & the Aristocratic Rogue* (Stroud: Sutton Publishing Limited, 2006), 212.

⁴⁷ Frank Barlow, "The King's Evil," *The English Historical Review* 95, no. 374 (1980): 3, http://www.jstor.org.proxy.lib.ohio-state.edu/stable/569080.

minds of the people. Alchemy offered the possibility of accomplishing more than tapping into the public belief system—it created the potential to actualize it. With the philosopher's stone in hand a monarch would legitimately possess the power of restoring his people's health, and if accessing God's power of creation were a sign of divine approval then the ability to heal would likewise garner public approval of monarchical faith and function as a testament to a king's divine right to rule.

Given the amount of political turmoil, the possibility of alchemy's universal medicine to actualize the King's Touch was particularly pertinent in the seventeenth century. In "Charles I and the King's Evil," M.R. Toynbee discusses Sir Raymond Crawford's theory of the revival of the practice of the King's Touch during Charles I's reign and the Civil War. Crawford linked this ceremony to the king's right to rule through divine right. Toynbee concludes that theories, including Crawford's, are debatable, but writes that it is a fact that "in the days of his prosperity Charles did touch on an extensive scale." Charles II continued this trend, perhaps in effort to rectify the years without a monarch. In *Rebranding Rule*, Kevin Sharpe finds evidence of the scale of Charles's efforts to reinstate this royal tradition:

After a decade of interregnum, there appears to have been a massive demand from subjects to take the benefit of royal curative powers, and Charles went to lengths to oblige. Record for the period 1669 to 1684 kept by Clerks of the Closet disclose that Charles touched nearly 29,000 persons over this period, that is over 1,800 a year.⁴⁹

⁴⁹ Sharpe, *Rebranding Rule*, 170.

⁴⁸ M.R. Toynbee, "Charles I and the King's Evil," *Folklore* 61, no. 1 (1950): 2, http://www.jstor.org.proxy.lib.ohio-state.edu/stable/1257298.

Charles II would not have engaged in the ceremony of the King's Touch had he not believed in its effect on establishing him as a monarch to his people or if there had not been the demand for it. This ceremony was clearly important to the kingship, and should a monarch be able to obtain healing power truly with the philosopher's stone, it would significantly affect his hold on authority.

Other nobles also stood to gain from alchemical patronage. Members of the noble class, like Digby and the Duke of Buckingham, were patrons to alchemists and also conducted their own experiments. Digby was known to have traveled the world in search of the secrets of transmutation; he was a member of the Royal Society, and conducted and published his own research. Buckingham had his own labs. Their patronage could have come out of their own interest in the subject of alchemy, but alchemical patronage would have also brought them favor at court, since their king also patronized alchemists. Should a noble be the alchemist, or sponsor the alchemist, to discover the Philosopher Stone, their status would certainly be elevated at court.

The ability to be a patron of alchemy was in and of itself was a remarkable feat.

The ability to fund experimentation and outfit laboratories, expenditures that may have been deemed frivolous in times of war and subsistence survival, demonstrated wealth and power and to be associated with such academic pursuits may have also reflected well on a patron's intelligence and character. Epistles mention the alchemical activity of patrons whenever possible. The front matter of Edward Bolnest's *Medicina Instaurata*, includes a letter to Bolnest from journalist and physician Marchamont Nedham that discusses

Bolnest's patron, the Duke of Buckingham. Nedham makes reference to Buckingham not only "plying his Laboratory at Home," but also "another at Court." 50

Royals and nobles may have been drawn to the more occult medicines, like alchemy, by the awareness of their mortality.⁵¹ Even a monarch is susceptible to the desire of possessing a medicine professed to have the power of prolonging life—not indefinitely, a myth that to the rational mind remained in stories, but certainly to an extent miraculous to early modern society without vaccinations or antibiotics. For a succession of monarchs to provide the appearance of immunity to mortal diseases, and for each to live to an extended age, would contribute to the common man's perception of the monarchy's alignment with divinity. They would seem blessed, their power esteemed in the eyes of God.

Many chemical physicians believed that they had found a universal medicine in treatments involving chemicals like antimony and mercury, and kings apparently believed them. Acton writes about medicine made from mercury, sulfur, and salt, which through alchemical processes, chymical physicians can "make Medicines easily curing those obstinate Diseases you [learned physicians following humoral theory] esteem incurable." Acton goes on to claim, "I have by me certain preparations out of [earth] and [mercury] far more precious than Gold, with which I know how to cure almost all curable Diseases in the body of man."⁵² Nedham writes to Bolnest, claiming that "they

⁵⁰ Edward Bolnest, *Medicina Instaurata* (London, 1665), A4v, Image 5, Early English Books Online, http://goo.gl/OXFgg1. Wing B3498.

⁵¹ François Lebrun, "Médecins et Empiriques a La Cour de Louis XIV," *Histoire Économie et Société* 3, no. 4 (1984): 557, http://www.jstor.org.proxy.lib.ohiostate.edu/stable/23610770.

⁵² George Acton, *A Letter in Answer to Certain Quaeries* (London, 1670), Bv, Image 6, Early English Books Online, http://goo.gl/oI5226. Wing A449.

[alchemists] every day mend the work of their Worships, and cure what they leave off as incurable by *Galenick Remedies*."53 Physician Theodore Kirkringius wrote:

unto ANTIMONY is not undeservedly assigned a CHARIOT TRIUMPHANT. For none were permitted to enter *Rome* in a Triumphant Chariot, that had not slayn at least five thousand *Enemies*, and obtained an intire Victory. Wherefore [...] *Antimony* (through the Gift of the *most* HIGH insited in it) more than any one Simple of Nature, be able to subdue and expel infinite Diseases (the Enemies of Humane Life) as is undoubtedly known it is.54

Alchemists actively advertised the abilities of their cures, wrote strongly and passionately in defense of their medicine's abilities. A king in search of a universal medicine would be tempted by these claims. That kings did potentially believe in the abilities of the alchemists is evidenced by the patronage they gave them, the money they invested and the leisure they gave to alchemists to associate the monarchy with their work.

If not literally, one could hope to immortalize oneself in a figurative sense. Sturdy theorizes that "the patronage exercised by French kings also reflected a desire to immortalise their own names."55 He discusses this idea in relation to the building of monuments and lasting architectural feats, but it could be widened to encompass all European figures of import and applied to scientific discovery. Surely humanity would remember the alchemist who could transmute metal into gold or cure any disease—and

⁵³ Bolnest, *Medicina Instaurata*, A5r, Image 5, Early English Books Online, http://goo.gl/1KIrC2.

⁵⁴ Basil Valentine and Theodore Kirkringius, Basil Valentine His Triumphant Chariot of Antimony, with Annotations of Theodore Kirkringius, M.D. (London, 1678), A3r, Image 3, Early English Books Online, http://goo.gl/T3PMvF. Wing B1023. Sturdy, *Science and Social Status*, 42.

along with him, the King or nobleman who made it possible. John Webster writes to Prince Rupert of the Rhine, Charles II's cousin, that Rupert's patronage of the Royal Society, many members of which were involved with alchemy, was "one of the happy fruits of His Majesties blessed and miraculous Restauration, and that which will speak him glorious to all succeeding Generations, beyond all his Royal Progenitors" in the hopes that Rupert may also award Webster, another alchemical author, his favor. Webster thereby claims that Rupert's alchemical patronage will earn the prince a positive, lasting legacy. ⁵⁶ Hartman clearly elucidates the desire for his master, Digby, to have such a legacy when he posthumously publishes some of Digby's work. Hartman claims:

For it is the height of my Ambition to make the Memory of my incomparable to Live, who was my private, and the Worlds publick Benefactor, which can no where do so with such Advantage as in his Learned Works, for thereby being dead he yet speaks and instructs.⁵⁷

Digby would have appreciated such an epitaph. Based on sentiments Digby himself elsewhere expressed, to leave a legacy of knowledge was a sacred duty. In an epistle dedicating *Of Bodies and of Man's Soul* to his son, Digby wrote, "Parents owe their Children [...] Spiritual Contributions to their better part, their Mind." Here, Digby explicitly shares the desire to give wisdom to his son, but the implication is also that he would give his knowledge—his "Spiritual," divine knowledge of alchemy—to everyone.

⁵⁶ John Webster, *Metallographia* (London, 1671), A2v, Image 3, Early English Books Online, http://goo.gl/P4Yslr. Wing 1231.

⁵⁷ Sir Kenelm Digby, *A Choice Collection of Rare Secrets and Experiments* (London, 1682), A4v, Image 5, Early English Books Online, http://goo.gl/g0OhDk. Wing D1425. ⁵⁸ Sir Kenelm Digby, *Of Bodies and of Man's Soul* (London, 1669), A2r, Image 2, Early English Books Online, http://goo.gl/ExZ3Ho. Wing D1445.

What he wrote was not limited to a private letter; he published it, offered this sentiment, the words he had for his son, in addition to his chymical writings to posterity. That decision was intentional and signifying of Digby's desire to share his knowledge with his name attached, memorialized in ink. For many alchemists, there was a motivation to expose nature's secrets. This exposition had not only the thrill of personal discovery and achievement, but also entailed sharing that essential knowledge with the world. The publishing of chymical works was founded in the philosophy of alchemical study, however, as Digby's dedications illustrates, it also carried the benefit of lasting personal distinction in a public sphere.

Conclusion

Legacy, distinction, authority—all reasons for which a monarch hoping to strengthen their fragile hold on power or nobles seeking favor would decide to patronize alchemy. Alchemy reinforced a monarch's claim to divine right by offering the potential to demonstrate God's creative and healing abilities, garnering them public approval through the perception of God's favor. Additionally, the benefits alchemy promised of health and wealth were alone positive incentive for investment. The legitimacy and celebrity of these alchemical achievements would also last far longer than an individual lifespan, contributing to one's place in history or, for patron kings, the validity of monarchy as an institution.

Enlightenment through alchemical patronage

In 1784, Enlightenment philosopher Immanuel Kant famously defined the Enlightenment:

Enlightenment is man's emergence from his self-imposed nonage. Nonage is the inability to use one's own understanding without another's guidance. This nonage is self-imposed if its cause lies not in lack of understanding but in indecision and lack of courage to use one's own mind without another's guidance. *Dare to know!* (*Sapere aude.*) "Have the courage to use your own understanding," is therefore the motto of the enlightenment.

This phrase describes the overarching themes of the Enlightenment movement as reason, exploration, and progress.⁵⁹

Over a century before Kant wrote this definition for Enlightenment, Nicaise Le Febvre discussed his definition of alchemy and the chemical physician:

To make short, it's nothing else but Physick, or knowledge of Nature it self, reduced to operation, and examining all its Propositions by reasons grounded upon the evidence and testimony of the senses, and not relying upon bare and naked contemplation [...] For it is not a Gown, or degrees taken in Universities, which constitute the Physician, but a solid knowledge of Nature.⁶⁰

Le Febvre's emphasis of empiricism and notions of learning outside a university demonstrates how the ideas of seventeenth-century alchemists set the tone for the development of the Enlightenment movement.

Early English Books Online, http://goo.gl/xRQxCL. Wing L925.

⁵⁹ Immanuel Kant, "What Is Enlightenment?," trans. Mary C. Smith (Columbia University, n.d.), http://www.columbia.edu/acis/ets/CCREAD/etscc/kant.html. Elizabeth Bond, "Intellectual Origins" (Class Lecture, the Ohio State University, January 26, 2016). ⁶⁰ Nicaise Le Fèvre, *A Compleat Body of Chymistry* (London, 1664), C2v, Image 13,

To the early modern scholars, alchemy was more than science in the terms of how we view it today—it was a philosophy, a way of thinking about and interacting with the world around them. At its core, alchemy promoted the search for truth. Practitioners of the art strove to discover and reveal nature's secrets. Action claims "the noble Science of Chymistry" is the science that "solely possesses all the keys of the three Kingdomes of Nature." This imagery of alchemy as the key to unlock nature's secrets was common in seventeenth-century chymical writings.

Although alchemy has its roots as a hidden art, laden with symbols and mysticism, and its practitioners were furtive about their discoveries, philosophers in the seventeenth century began developing a new way of thinking and experimenting; this was the beginning of the Enlightenment. Alchemists adapted their art, taking up what would become the Enlightenment principles of empiricism and accessibility. They used this new image to place themselves in opposition to Galenic and Hippocratic physicians, still resistant to publishing in the vernacular and particular about their learned status.

For patrons, alchemy's alignment with Enlightenment ideals would have been appealing, especially for the noble scholars who could practice the art themselves as well as facilitate the participation of others. Patrons would have also found the shift in emphasis from private to public good attractive because it would enable them to portray themselves to the masses as generous intellectuals. Royal patrons especially would have had to follow the tide of the growing popularity of knowledge exchange in order to maintain

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⁶¹ Acton, *Physical Reflections*, A2v, Image 3, Early English Books Online, http://goo.gl/DPyKlu. In alchemy, the three kingdoms of nature were considered to be salt, sulfur, and mercury.

their image. Alchemy, inextricably bound to natural philosophy and royal academic societies, benefited from this patronage.

John Locke, Enlightened Alchemist

"I must request one favor of you," Dr. David Thomas wrote to John Locke on July 9, 1666. This favor was to obtain mineral water for Lord Anthony Ashley Cooper, later the first Earl of Shaftesbury. Ashely would be in Oxford later that week to obtain treatment for his liver. Locke met and treated Shaftesbury in Thomas' place, and Shaftesbury was so satisfied with him that he invited Locke, at Shaftesbury's expense, to accompany him to the mineral wells. Locke would eventually become not only Shaftesbury's personal physician for himself, his family, and his friends but also, as their correspondence shows, a trusted man of business and close friend and confidant. With Shaftesbury's patronage, Locke was provided employment and financial support.

As Shaftesbury was a prominent politician and member of parliament, he influenced Locke's ideas and facilitated the opportunity for Locke to develop his philosophical voice. The medical philosophy for which Locke advocated, that Thomas and Locke both practiced and over which they corresponded, that impressed Shaftesbury and ultimately led to Locke's prodigious career and legacy, was chemical. As a figure essential to setting the tone of Enlightenment, Locke's association with alchemy indicates alchemy's integral position in the development of Enlightenment science and ideas.

Through Locke's correspondence, we have evidence of his interest and active participation in alchemy. He exchanged letters discussing alchemy with Robert Boyle and

⁶² De Beer, *The Correspondence of John Locke*, 1: 284-5; E.S. De Beer, *The Correspondence of John Locke*, vol. 2, 8 vols. (Oxford: Oxford University Press, 1976); Maurice Cranston, "Locke and Liberty," *The Wilson Quarterly* 10, no. 5 (Winter 1986): 85-6, http://www.jstor.org.proxy.lib.ohio-state.edu/stable/40257094.

Isaac Newton, among others. These letters contain not mere allusions or hints of alchemical thoughts and theories, but open discussion of recipes and experimentation. While in Cleves, Locke wrote to Boyle and reported on a metallurgical mining process, associating it with alchemy though it was actually smelting, something to which Nummedal referred in her discussion of entrepreneurial alchemy. 63 Locke and Boyle also discuss alchemical recipes and Locke requests advice on the collection of plants for these recipes. 64 Boyle also entrusted some of his papers to Locke, including those of an alchemical nature and involving experimentation with gold. 65

Following Boyle's death, Newton and Locke write about one of Boyle's recipes for the creation of gold, which involved mercury and a kind of red earth that Boyle had in his possession. Newton writes to Locke, expressing interest in the recipe and Locke's possession of it along with the red earth. According to Newton, Locke had requested a sample of the earth. A subsequent letter reveals that Locke sent Newton some of the earth, shared the recipe with Newton, and expressed intentions to attempt the experiment. Newton later shares his feelings about transmutation and the creation, or as they call it "multiplication" of gold. In his letter, he is skeptical of the experiment and about transmutation in general, but claims that Locke is more convinced of the possibility. Newton writes:

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⁶⁶ Ibid. 4:476–7.

⁶³ De Beer, *The Correspondence of John Locke*, 1976, 1:230. Nummedal, *Alchemy and Authority*, 92.

⁶⁴ De Beer, *The Correspondence of John Locke*, 1976, 1:279, 309–10.

⁶⁵ E.S. De Beer, ed., *The Correspondence of John Locke*, vol. 4 (Oxford: Oxford University Press, 1979), 485.

In diswading you from too hasty a trial of this Recipe I have forborn to say any thing against multiplication in general because you seem perswaded of it.⁶⁷

Further evidence of Locke's belief in alchemy and his active scholarly pursuits in the subject appear in his involvement with a J. Schard, or Dr. Scardius as Locke refers to him in a letter to Boyle. In Locke's letter to Boyle, written in December of 1665, Locke is searching for someone in Cleves also studying alchemy with whom to exchange knowledge. He writes:

I have not yet heard of any person here eminently learned. There is one Dr. Scardius who, I am told, is not altogether a stranger to chemistry. I intend to visit him as soon as I can get a handsom opportunity. The rest of their physicians go the old road, I am told, and also easily guess by their apothecary's shops which are unacquainted with chemical remedies.⁶⁸

Locke later receives a letter from J. Schard, discussing chymistry and recipes involving antimony and other chemicals, suggesting that Locke was serious enough about his interests to reach out to the physician after writing to Boyle.⁶⁹ This correspondence demonstrates Locke's opinion of iatrochemistry as advanced in comparison to what he calls "the old road," essentially dismissing the traditional Galenic and Hippocratic philosophies as outmoded by chymical medicine. To be "eminently learned" was no longer to be educated in humoral theory; true learning, at least in the minds of Locke, Boyle, and their peers in natural philosophy, entailed chymical knowledge.

⁶⁷ Ibid., 4:490.

⁶⁸ De Beer, *The Correspondence of John Locke*, 1976, 1:228.

⁶⁹ Ibid., 1:277–8.

Patrons like Shaftesbury, who were drawn to individual physicians like Locke for whatever success or belief their treatments yielded, endorsed iatrochemistry and promoted it. Shaftesbury had Locke treat the rest of his family, and referred his friends to the physician. He also enabled Locke to continue his education and gave him a platform from which to promote his ideas. Practitioners like Locke, who were thus legitimized by the elite and associated with scholarship and philosophy, made alchemy appear less of an occult fancy and more of an academic pursuit, rendering it a field more approachable to patrons.

Vernacular publication and the accessibility of alchemy

In "Secrets Revealed: Alchemical Books in Early Modern England," Lauren Kassell discusses a paradox in early modern alchemical publishing. Most early European alchemists stressed the secret nature of the knowledge they shared with their disciples. Nummedal claims, "There is no question that alchemical authors advocated concealment, often developing elaborate practices to protect their art form the uninitiated." This sentiment is undoubtedly true for early alchemy, and even alchemy at the beginning of the early modern era, including the sixteenth and beginning of the seventeenth century, which is the focus of Nummedal's study in *Alchemy and Authority*. Yet as Kassell observes, which my own research into alchemical writings supports, we see a surge in vernacular alchemical publications, discussing and revealing knowledge in the public sphere in the seventeenth century, and particularly during the restoration."

⁷⁰ Nummedal, *Alchemy and Authority*, 141.

⁷¹ Lauren Kassell, "Secrets Revealed: Alchemical Books in Early-Modern England," *History of Science* 49, no. 162 (2011): 62, http://www.people.hps.cam.ac.uk/index/teaching-officers/kassell/secrets-revealed.

Alchemical authors write claiming to have knowledge for public good, knowledge they wish to share and interpret, going so far as to translate the secret works of the past for the present and future public. When alchemists publish their own philosophies, they follow a long-standing tradition in alchemy of publishing in the vernacular. In the seventeenth century, alchemists consciously use this practice of vernacular publishing to frame themselves as the scientists and physicians of the future, embracing the openness that would set them apart from the fraudulent alchemical practitioners patrons and patients feared and the learned physicians who remained exclusive. The idea that alchemy and Enlightenment ideals merged explains Kassell's paradox of professed secrecy contradicted by alchemical publishing. Alchemists would set the tone of Enlightenment, their voices in the halls of academic societies and reaching out from the epistles and prefaces of their writing, pushing for empiricism and accessibility.

Epistles of alchemical texts explicitly state the objective or desire to publish openly and reveal alchemical knowledge. *A Philosophicall Epitaph in Hieroglyphical Figures with Explanation* is dedicated to Robert Boyle. The dedicator, a W.C., explains the various translations that he includes in his collection. "I have managed *Mydas* his Golden Ass," he writes, "so as to make him serviceable to all this Nation, to bear their burthens, bringing him with these new Lights and Treasures here before your view."⁷³ W.C. believes that the alchemical knowledge to be gained from this translation will aid the public. This work is a translation as well, so he is bringing a work out of a language

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⁷² For reference to the tradition of alchemical vernacular publishing, see Nummedal, *Alchemy and Authority*, 20–22.

⁷³ William Cooper, *A Philosophicall Epitaph in Hieroglyphical Figures with Explanation* (London, 1673), A2v-A3r, Image 5, Early English Books Online, http://goo.gl/JyPQpW. Wing C6062.

that limits his public's access to the vernacular, spreading knowledge. Several other authors also express this purpose. As Nedham comments, "they say, I should not have published so much in English," they referring to the Galenists of whom he complains in his letter. He justifies himself, explaining:

Did not the Old reputed Princes of the Profession write all they wrote in their own Country-Languages? as *Hippocrates*, and *Galen* in Greek; the Arabian *Avicen* and his Fellows in Arabick; therefore, if I have espied faults in the common Doctrines and Practice, why should not our Countrymen be made acquainted with them, seeing they are the Persons that are concerned, and most likely to promote that which the splendid Faction oppose?⁷⁴

Nedham separates the achievements of medicine from the language in which it is presented. He reminds Bolnest, and through Bolnest the readers of this text, that the old masters, to whom the learned physicians cling in admiration, published in their own languages, and so it would follow that the revelations of English physicians should be published in English. Moreover, Nedham asks if the purpose of medicine is to aid the patient (for physicians of England likely an English patient) then why *wouldn't* medical cures and theories be published in English for their benefit?

Le Febvre desired that all physicians, regardless of their preferred philosophy, unite, "to the end that they might jointly dedicate themselves to the Publick good." For that reason, he says, "I would imitate the most eminent Authors of Germany, who

⁷⁴ Bolnest, *Medicina Instaurata*, a6v, Image 16, Early English Books Online, http://goo.gl/FC06iz.

thought themselves obliged to write of Chymical Pharmacy in the vulgar Tongue" for the benefit of both medicine and the general public.⁷⁵

Just as more medical philosophies added to competition amongst physicians, publishing in the vernacular had an impact on the monopoly of learned physicians by lessening their exclusivity of their control over medical knowledge. The learned society of doctors desired controlled access to medicine; limited access to medical knowledge ensured that their services were required, and so they continued to publish in Latin. Nedham observes that "the *Galenists* are so eager for a power to hedge in the common, for fear it may be over-stock'd, and to suppress, or deter, all others from entering into what they would fain to make their own Propriety, seeing it is an easie matter for ingenious Men."⁷⁶ He then writes that "there are in the field of Nature, yet undiscover'd, Secrets enough for Ages to fetch forth, and to find work for all the World."⁷⁷

Alchemy, the True and Noble Art

Galenist and Hippocratic authors largely attempted to turn public and patron opinion against the alchemists by framing their medicine as vulgar. They grouped alchemists with frauds, poisoners, common and manipulative empirics and apothecaries. In the epistles of medical texts, authors who support these learned physicians generally express the fear that the medical field is threatened. In *Medela Medicorum*, physician William Staines believed the field was "tottering," besieged by "Quacks, Empericks, and

⁷⁵ Nicaise Le Fèvre, *A Compendious Body of Chymistry*, av, Image 10, Early English Books Online, http://goo.gl/byCUx7.

⁷⁶ Bolnest, *Medicina Instaurata*, χr, Image 9, Early English Books Online, http://goo.gl/4N9hgg.

⁷⁷ Ibid., χ r-v, Images 9-10, Early English Books Online, http://goo.gl/4N9hgg.

other intruders." ⁷⁸ They also exploited the fears of poison and bad medicine. Le Febvre notes this tactic, claiming, "You may observe likewise the envy and malice of those that carp at and rail against Chymistry, and how ignorantly they averre, that this admirable Art is not occupied by its followers, but on poysons." ⁷⁹

The ignorance Le Febvre attributes to his opposition is representative of the alchemists' strategy of defense to the learned physicians' denunciations. In the preface to Metallogrophia, Webster refers to the learned physcians as "the ignorant and the envious." Israel describes these same ignorant people as those who God deemed unworthy of alchemy's discoveries as struck blind, and are therefore unable to recognize enlightenment. In his dedication to Buckingham, Bolnest tells the Duke:

[you are] one, who by Your own most Noble and Acute Genius,
Conceptions, Observations, have not only discover'd the Vanity of the
Galenick way, but rendered Your Self most Perfect, as well in the
Practick, as Theory of Experimental Philosophy, and consequently are

⁷⁸ W S, *Medela Medicorum* (London, 1678), A7v, Image 8, Early English Books Online, http://goo.gl/5cWvMp. Wing S5169.

⁷⁹ Le Fèvre, *A Compendious Body of Chymistry*, a2r, Image 10, Early English Books Online, http://goo.gl/5MRXkw.

⁸⁰ Webster, *Metallographia*, B1v, Image 6, Early English Books Online, http://goo.gl/O1fn0J.

Valentine, *Revelation Des Mysteres*, aiiv-aiiir, Images 6-7, http://reader.digitale-sammlungen.de/de/fs1/object/display/bsb10220449_00006.html."1'ordre de la Prouidence diuine, de permettre que ces sortes de gens qui sont du tout indignes de la connoissance des *Merueilles* de la NATVRE, soient frappez, d'un tel aueuglement, que de n'auoir pû descouurir aucun rayon de ces grandes lumieres *de l'Antiquité*, & de celles qui sont encores en ce *Siecle*, lesquelles nous donnent moyen de penetrer dans ce THRESOR admirable de la *Philosophie naturele*."

abundantly Stored, and Enriched with those two worthy and commendable Attributes of the Learned, Judgment and Candor.⁸²

This statement highlights the falsity and conceit of the learned physicians, framing alchemy as the more fulfilling knowledge and its practitioners as the truly learned. He implies the enlightenment of the alchemists, assigning them the virtues of "Judgment and Candor," perhaps for their wisdom in following the path of chemical philosophy over humorism and for their goal of revelation. The idea of candor may also tie in to the alchemists' habit of publishing in the vernacular, for all to see and use.

Bolnest's words also demonstrate how alchemists portrayed their practice as noble compared to the self-serving ways of learned physicians. Alchemical writers often highlighted the perceived vanity of learned physicians, focusing on their apparent preoccupation with status, profit and reward. Nedham writes to Bolnest:

I would not willingly have you, nor my self, lose one Afternoons operation in your Laboratory, for all the Honours Academical, and the Venison that helps to make them; and because we have a mind all the days of our lives to be Learners, therefore we are not at leisure to cross the Sea, and return *Doctors* as wise as we went.⁸³

Nedham's words target the learned physicians, who are usually associated Galenic and Hippocratic methods. In this statement, he claims there is more value in actual lab experimentation—the kind of empiricism that would become the foundation of Enlightenment science. He suggests that true learning is a lifestyle, an everyday

⁸² Bolnest, *Medicina Instaurata*, A2v-A3r, Image 3-4, Early English Books Online, http://goo.gl/zM1X2A.

⁸³ Ibid, A7r-v, Image 7, Early English Books online, http://goo.gl/PtrkcF.

commitment. One is not 'learned' for attending a medical university, which he says does not actually increase one's knowledge, but from personal experimentation. Additionally, the term "leisure" suggests that the alchemists are the physicians accomplishing legitimate work. Alchemy was therefore the noble art; its practitioners sacrificed external honors and recognition, not just for the pursuit of knowledge, but for the active application of that knowledge through experimentation.

Alchemists also believed that theirs was the noble art for the professional risk of exploring unknown medical territory through their willingness to experiment. There was a notion amongst alchemists that their art was freeing—in opposition to the Galenists, alchemists promoted freedom of thought, another tenet of the Enlightenment. Webster refers to alchemy as an "Experimental Philosophy." He claims that because of alchemy, "Mens judgments may no longer be fettered in Scholastick Chains, nor kept always in the Prisons of Academick Opinions." Alchemists believed that learned physicians limited the field to Galen and Hippocrates, monopolizing medicine for themselves. Alchemy explored new territory, leading to new discovery. Nedham writes to Bolnest:

the Profession of Physick may be redeemed from that obloquie which the usual unprofitable Learning, and idle pride of the Professors, hath brought upon it among the People; and that from your Pen men may know, there is a way to true Physical Learning, which lies quite out of the Common *Scholastick Road;* and that we must pass through the fire to it, while the

Webster, *Metallographia*, A4v, Image 5, Early English Books Online,

http://goo.gl/55SzMJ.

fine Fellows are afraid to follow for fear of singing their Scarlet. 85

Nedham believed that the "Professors," these learned physicians, were to blame for any of the public's dissatisfaction with medicine. He thought that the field had stagnated, from "unprofitable Learning" and "idle pride;" there was necessity for new ideas, like those from alchemy, to push medicine forward. The learned physicians, in Nedham's eyes, clung to their old philosophies from Galen and Hippocrates out of fear. They were afraid to venture from the "Scholastick Road," to experiment and develop new theories, because it might affect the reputation they so coveted, whereas, in contrast, the alchemists must have forged ahead on a path of enlightenment.

Israel's dedication to Vautier demonstrates this idea of bravery as well. He wonders, "How many centuries pass giving us savant men of considerable authority, who do not want to hide the light under the bushel, [who] leave us very grave and learned traditions in favor of chemistry." These men Israel mentions seem to stand apart from others, desiring the enlightenment of chemistry even when others attempt to stamp it out.

Gentleman Scholar, Enlightened Ruler

Patrons favored alchemy due to these connections with enlightenment and progress. This recognition was acknowledged by alchemists of the seventeenth century.

Nedham states that, "most of the great Lords, and other Noble Gentlemen of Learning do

⁸⁵ Bolnest, *Medicina Instaurata*, A6v, Image 7, Early English Books Online, http://goo.gl/PtrkcF.

⁸⁶ Valentine, *Revelation Des Mysteres*, Aiiir, Image 7, http://reader.digitale-sammlungen.de/de/fs1/object/display/bsb10220449_00007.html. "Combien les *Siecles* passez nous ont-ils fourm de *sçauans homes* d'authorité considerable, qui ne voulans *pas cacher la lumiere sous le boisseau*, nous ont laiβé de tres-graues & doétes *traditions* en faueur de la CHEMIE."

prefer our way before the *Galenick*."⁸⁷ Patrons, through their aid, benefited from association with their projects; to patronize an alchemist brought the potential to enhance their own reputation. Patrons could link themselves with the nobility the alchemists attributed to their art. The nature of alchemy could have also been appealing because in the spirit of enlightenment alchemists wished for others to be involved in their art as well. Patrons could not only be patrons of alchemy but alchemists themselves.

Physician Edward Bolnest personifies Nature as a keeper of secrets, but also a teacher to those who are open and willing to apply themselves. To his patron, George Villiers, second Duke of Buckingham, he says, "You are One whom Nature hath already admitted, and her Self taught You in her own Schole, the Tract of her most Secret Operations." Of noble patrons, Nedham further claims:

it were happy for us, if all the great Lords and Gentlemen of England, would (as the King himself, and divers of Nobility have given an excellent example) erect Laboratories of their own, and spend time in the invention of Remedies more sufficient, and of a Philosophy more conducible, to cure the Diseases of this Age; for then, those noble Personages finding by experience, how much more of worth and use is attainable, beyond what is contained in the *Galenists* Books, or is in Vogue among such idle Bookmen, would soon spue them out of their Houses, and in their stead entertain the true Sons and Labourers of Art and Nature, who are in Truth,

⁸⁷ Bolnest, *Medicina Instaurata*, A6v, Image 7, Early English Books Online, http://goo.gl/Y8Eclp.

⁸⁸ Ibid, A2v-A3r, Image 3, Early English Books Online, http://goo.gl/zM1X2A.

if not in Title, the only Doctors, because they are able to teach the other what Physick is indeed.⁸⁹

Nedham invites anyone who is interested to study alchemy, for that expanded study benefits alchemy and the public in a multitude of ways. When patrons become involved in alchemy they legitimize the subject and increase the ranks of alchemists searching for the cures and philosophy that would benefit mankind. These are not the words of an esoteric scholar hoping to support himself, but a physician wanting to serve the public.

According to Israel, Vautier was "so much esteemed in the court and by the people, that when it was a question of choosing someone who merited the duty of *Premier Medecin* for the king, one elected your person by a public act." Israel then asks for Vautier's "endorsement"—his patronage—to "close the mouths of those who condemn that which their spirit can't understand." Since the public gave Vautier their trust and support, Israel tells him, "I do not believe that you can justly refuse the continuation of these studies to the public, because you are indebted to the public […] You fulfill this duty and answer the hopes that one conceives for you."90 The duty of which he speaks is perhaps a responsibility to

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⁸⁹ Ibid, χr-v, Images 9-10, Early English Books Online, http://goo.gl/4N9hgg.

Valentine, *Revelation Des Mysteres*, Aiii_v-Aiv_r, Images 8-9, http://reader.digitale-sammlungen.de/de/fs1/object/display/bsb10220449_00008.html. "tellement estimé en la Cour & du people, que lors qu'il a esté question de faire choix de quelqu'un qui meritast *la charge de Premier Mèdecin du Roy*, on a fait election de *vostre personne* par un adueu public"; "approbation"; "fermera la bouche de ceux qui condamnent ce que leur espritne peut comprendre"; ie ne croy pas qu'auec iustice vous puissiez refuser la continuation de ces pretieuses estudes au public, car vous luy estes redeuable […] Vous acquiter de ce deuoir & respondre aux esperances que l'on a conceues de vous."

enlighten others with the alchemical knowledge he has gleaned through his studies, as Israel had hoped through his request for patronage.

Charles II and Louis XIV fulfilled their duty to general education and the spread of knowledge by founding academic societies. The Royal Society in England and then the Académie des Sciences in France were established to encourage scientific discussion and experimentation. Prior to the foundation of these societies, alchemists gathered informally, meeting in groups like the cabinets of France, the scientific counterpart to literary salons. 91 Still, the goals of these organizations, formal and informal, were the same: to promote the free discussion and advancement of the sciences. Through their involvement in these groups, as members and endorsers, patrons improved their status as intellectual, cultural leaders and gave credence to alchemical arts. Both of these organizations were associated with alchemy in the seventeenth century. The alchemist Sir Kenelm Digby presented at the first meeting of the Royal Society in 1660 at Gresham College, before it had received its royal charter and Charles II's patronage. Boyle, Locke, and Newton were all members of the Royal Society, and Newton was once its president. Of the Académie, Principe notes that it reserved places for practitioners of chymistry to become members making it "the first place where the subject achieved an official, high profile, and state-supported status as an independent scientific discipline."92

In France, the establishment of the Jardin Royal des Plantes at the beginning of the seventeenth century served similarly to expand access to medical knowledge. Despite protests from the Faculty of Paris, the Jardin took on a teaching capacity. Sturdy argues that the Jardin exposed more of the public to scientific teachings because lectures were

91 Sturdy, Science and Social Status, 13–4.

⁹² Principe, Secrets of Alchemy, 87.

open, free, and taught in the vernacular, French, rather than in Latin as university lessons were. One of the initial three primary subjects of the Jardin was chemistry. 93 Students of the Jardin who later became more involved with alchemy included Charles II and Le Febvre. After his return to England, Charles II made his own laboratory under his closet at Whitehall Palace. 94

The front matter of chymical texts provides insights into reasons behind noble patronage and involvement in alchemy. According to Webster in his epistle, Prince Rupert of the Rupert was a member of the Royal Society and therefore he was "obliged to be an encourager, and cherisher of all attempts (though of the lowest and meanest persons) that tend to the advancement of Experimental Philosophy." After this logic, however obsequious, Webster expresses the desire to "receive the same candor (in some measure) that your Highness seemeth to have afforded to all." This image paints Rupert as a common patron of alchemists. Webster suggests that Rupert may contribute to alchemy as a result of "the propension, and inclination" he claims Rupert has for the chemical science. 95 In *Medicina Instaurata*, Nedham discusses the second Duke of Buckingham's patronage of Bolnest and refers to Buckingham as "a Prince by Merit as well as Title: for whether you take him in the Chymical, or in his Politick capacity, he appears no less in either." Nedham's complement illustrates how a patronage can have a positive impact on the patron's reputation. Buckingham's alchemical pursuits enhanced

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⁹³ Sturdy, Science and Social Status, 8.

Paul Kleber Monod, *Solomon's Secret Arts: The Occult in the Age of Enlightenment* (New Haven: Yale University Press, 2013), 29, http://site.ebrary.com/id/10689563.

⁹⁵ Webster, *Metallographia*, A2v-A3, Image 3, Early English Books Online, http://goo.gl/P4Yslr.

⁹⁶ Bolnest, *Medicina Instaurata*, A4v, Image 5, Early English Books Online, http://goo.gl/j8DZaN.

his reputation as a noble, for he was not only a politician but also, thanks to his patronage, an intellectual. Nedham has essentially claimed that through Buckingham's chymical studies, his enlightened attitude, the Duke deserved his position in society.

A community of learning

The foundation of these societies demonstrates that alchemy, or at least the way alchemists marketed themselves and their art, was growing to become about more than personal gain. Practitioners wanted to take part in experimentation and the spread of knowledge. They searched for enlightenment. Locke's attitude toward his chymical pursuits seems to align with this reason. His aim in alchemical experimentation seems not to have been driven by a desire to create gold itself, but was rather more for the process of learning and making discoveries. He complains of this motivation for pursuit of alchemical study in a letter to Boyle, bemoaning, "as I once heard you say, I find it true here, as well as in other places, that the great cry is ends of gold and silver." ⁹⁷

Locke was, for a time, a member of the Royal Society. His correspondence also draws attention to the publication of knowledge that was facilitated by such organizations. After helping Boyle with an experiment for mining involving a barometer, he wrote to Boyle about the results and said, "since I find by the two last Philosophical Transactions, that Observations on the Torricellian Experiment are much look'd after, and desired to be compared; if for want of better, this should be thought fit to fill an empty Space in the Philosophical NewsBook." The Philosophical NewsBook refers to a journal of the Royal Society. 98 Though Locke's attempt at experimentation was not published, this exchange, and his correspondence as a whole, exhibits the intellectual

⁹⁸ Ibid, 1:273–5.

⁹⁷ De Beer, *The Correspondence of John Locke*, 1976, 1:228.

culture of the mid-seventeenth century. Locke shares what knowledge he has with his scholastic peers, like Newton and Boyle. He even sends some of his limited, precious supply of Boyle's red earth to Newton because Newton expressed desire to experiment with it. When Schard replies to Locke in 1666, he says, "I shall never keep anything so secret as to deny it to you; you have only to let me know in what matters I can gratify your wishes, if it is in my power [...] so that if need be I might assist you with advice." This was before Locke had gained Shaftesbury's patronage, before he was a figure of import. There appears to be no particular reason Schard would share his knowledge with Locke, other than a desire to promote further experimentation and knowledge in his art. Scholars were part of communities of knowledge, and they wanted to share their work, both with each other and with the public.

It was this kind of practice that would create the setting for the Enlightenment and facilitate alchemical patronage. For not only could patrons become intimately involved in the sciences they supported, practitioners could also work together to bring their subject to light and obtain funding. An open scholastic community created an academic network. The alchemists involved could support each other, through the exchange of knowledge, as Schard and Boyle did for Locke when he was early in his studies, and as Locke later aided Newton.

Alchemy and its evolving connotations

Certainly not all alchemists fit within this trend of embracing the accessibility that would become part of Enlightenment philosophy. Considering that the mid- to late-seventeenth century was a transitional period in the foundation of Enlightenment rather

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⁹⁹ Ibid. 1:277–8.

than the movement itself, it would follow that not every alchemist would value openness. Also given the complexity of the alchemical field, with the various philosophies, each emphasizing different motivations and methods, the issue of secrecy would inspire diverse responses. Returning to Newman and Principe's "Alchemy vs. Chemistry," the main difficulty in defining alchemy derives from the belief that alchemy and chemistry were as distinct in early modern Europe as today. In actuality, they argue, these sciences were one in the same, which was the approach I also took in this paper. The distinction began largely in the eighteenth century, when Enlightenment as an intellectual movement was in full force. 100

Alchemists advertising themselves to patrons and defending the field have a history of dividing themselves from those who cast a negative light over the subject. In *Alchemy and Authority*, Nummedal writes on true alchemists versus *Betrüger*, a Germanic term that she defines as meaning frauds or imposters. ¹⁰¹ Alchemists of the Holy Roman Empire in the sixteenth and early seventeenth century, attempting to develop their image and maintain legitimacy, wrote about themselves as true alchemists and denounced the alchemical *Betrüger* as their adversary; it was the *Betrüger* who corrupted the field of alchemy that was otherwise valuable, not alchemy as a whole that was false. ¹⁰² Just as the alchemists had divided themselves then, they would do so again at the turn of the eighteenth century. According to Newman and Principe, writers began to detach alchemists from chemists at the end of the seventeenth century. ¹⁰³

¹⁰⁰ Newman and Principe, "Alchemy vs. Chemistry," 32–3.

¹⁰¹ Nummedal, *Alchemy and Authority*, 4.

¹⁰² Ibid, 48–72.

¹⁰³ Newman and Principe, "Alchemy vs. Chemistry," 44.

Starting at the end of the seventeenth century, and more forcefully in the eighteenth century, the practitioners of the Enlightenment science would begin referring to themselves as chemists. These chemists separated themselves, at least publicly, from the targeted alchemical processes, such as transmutation. As Principe explained, ""Alchemy' became the scapegoat for chymistry's sins." Consequently, those who still practiced transmutation had to do so in privacy. Alchemy, as a whole field rather than a subset of individuals, became associated with deception and fraud. The more reclusive, esoteric art of those who still claimed the title of alchemist were denounced, giving rise to the distinction we know today and burying the role of alchemy in the revolution of scientific philosophy in associations with the phony and the occult.

It was therefore possible that in the seventeenth century there were alchemists, not yet divided from 'chemists,' who openly practiced alchemy. As alchemists, they preached accessibility and the exchange of knowledge over secrecy and strove to expose nature's secrets rather than remain esoteric like their reclusive colleagues. In this way, alchemists were essential in establishing the groundwork for what would become the Enlightenment, and it was possible that a field with a legacy steeped in mystery could appeal to patrons for advocating public knowledge.

Patrons hoped to enhance their reputations in order to appeal to a public desiring access to knowledge and intellectual leaders, so they bought into the alchemist's philosophy of science. Patrons also demonstrated their support by establishing academies and facilitating scientific discussions that created a space for alchemy in scholarly communities. Given this support, alchemy in the seventeenth century became essential to

¹⁰⁴ Principe, Secrets of Alchemy, 87.

the development of the Enlightenment. A vocal subset of alchemists within the field portrayed alchemy as a science that desired the spread of knowledge, for the public, through exchange and invited involvement. This attitude not only enabled alchemists to set themselves apart from their adversaries, the Galenist and Hippocratic physicians, but also allowed them to set themselves up as the science of the future.

Conclusion

Patronage of alchemy is much more complicated than a simple desire for gold or immortality. It is more than a stone or a cure. It is about the meaning beyond those things, all the power alchemists could create for their art in order to render it serviceable to noble and royal patrons. It is everything from the validity of one man on the throne to the throne itself, the legacy of an individual to the foundation of an entire philosophy of science. In the study of alchemy, one must consider alchemy, not only by what it actually was, but also for all it had the potential to achieve. To do otherwise would be a disservice to both the patrons who chose to invest their time, money, and reputations in alchemy, and to the alchemists themselves who had the agency and skill to market their practice.

The context of alchemical patronage in the seventeenth century is also vital to understanding the motivations of those who supported alchemy. It is significant that Charles II, the king who grew up without his throne, studying at the Jardin in Paris while he bided his time in exile, and who upon reclaiming his throne dealt with issues of authority through doubts about his religion and the monarchy, chose to be a patron and practitioner of alchemy. It is significant that Louis XIV, in the aftermath of the Fronde,

bent on establishing his absolute authority, brought alchemists to court and protected organizations associated with alchemy. It is significant that the Enlightenment developed in a time when alchemists wrote about empiricism and accessibility.

On the eve of the Enlightenment, alchemists were on the defensive, and actively responded to the needs and threats of their environment. The front matter of alchemical texts—their dedicatory epistles, letters, and prefaces—read like alchemy's pitch to patrons for support. In the words of alchemists, chymistry was a true science, based in reason and experimentation, actively pursuing cures and discoveries that would benefit the public. Alchemy was progressive, its practitioners enlightened learners and scientists, unlike the Galenists and Hippocratic physicians of old. Alchemy was the science of important scholars, like Locke, of intellectual nobles, like Digby and Buckingham, and of kings. It was a science that presented hope for the tangible results of gold and the philosopher's stone, but also for something more, something divine: the powers of creation and nature. Alchemists presented the idea of a science that could provide patrons with legitimate authority and an enlightened reputation, and patrons bought in to that possibility.

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